

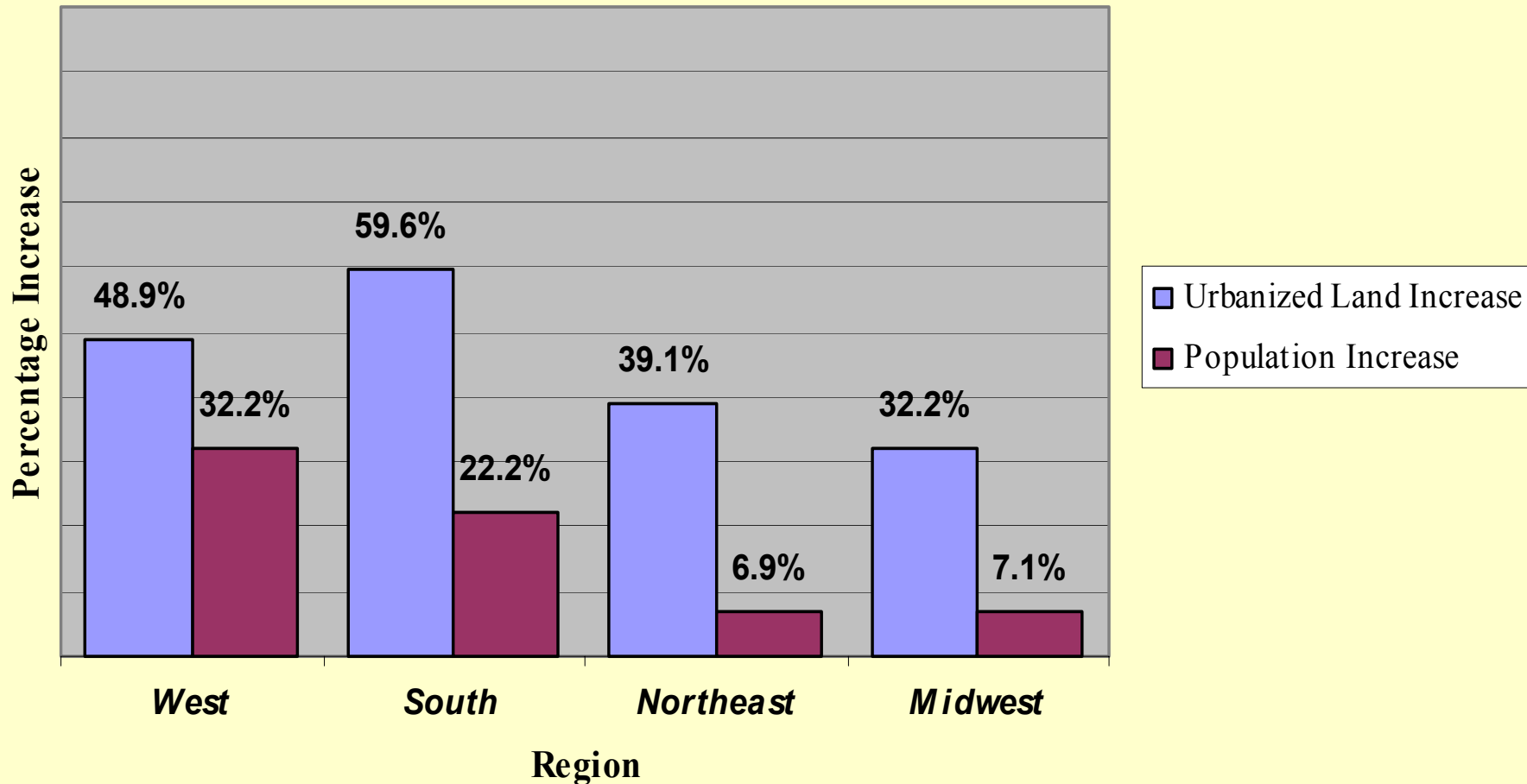
Smart Growth and Climate Change

Making a Difference
Through Better Performance

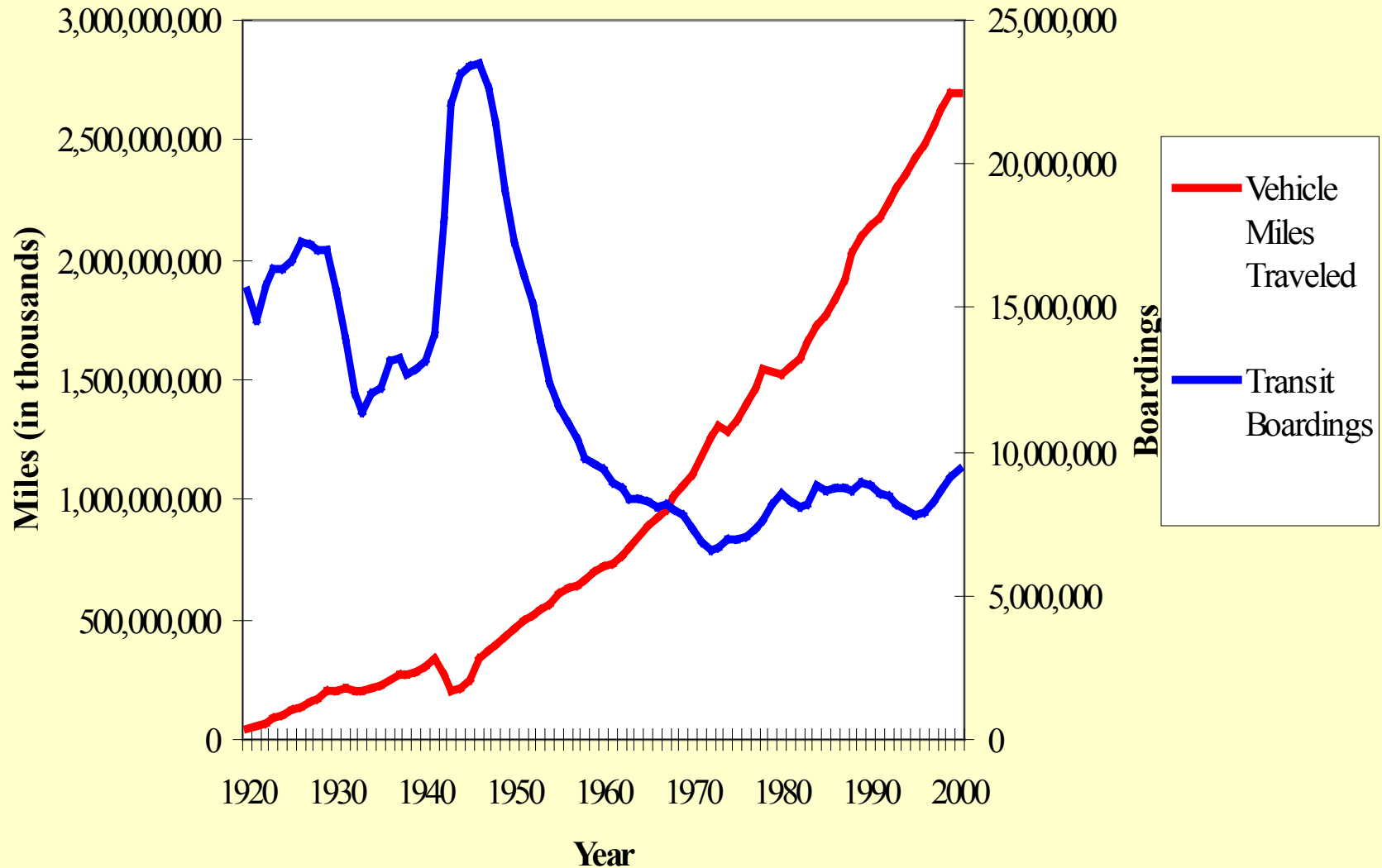


Suburban Sprawl: Regional Differences

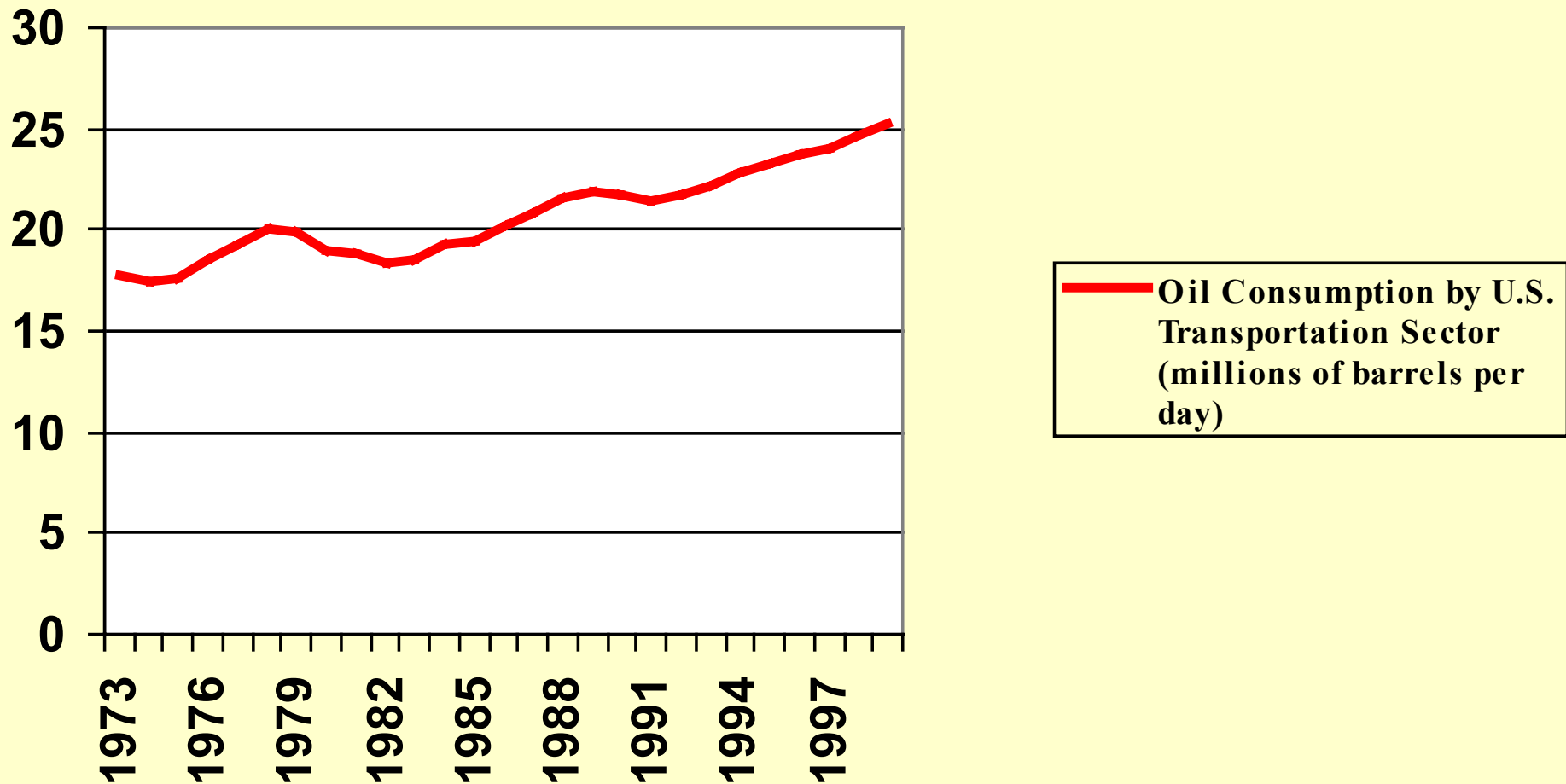
Population vs. Urbanized Land Growth, 1982-1997



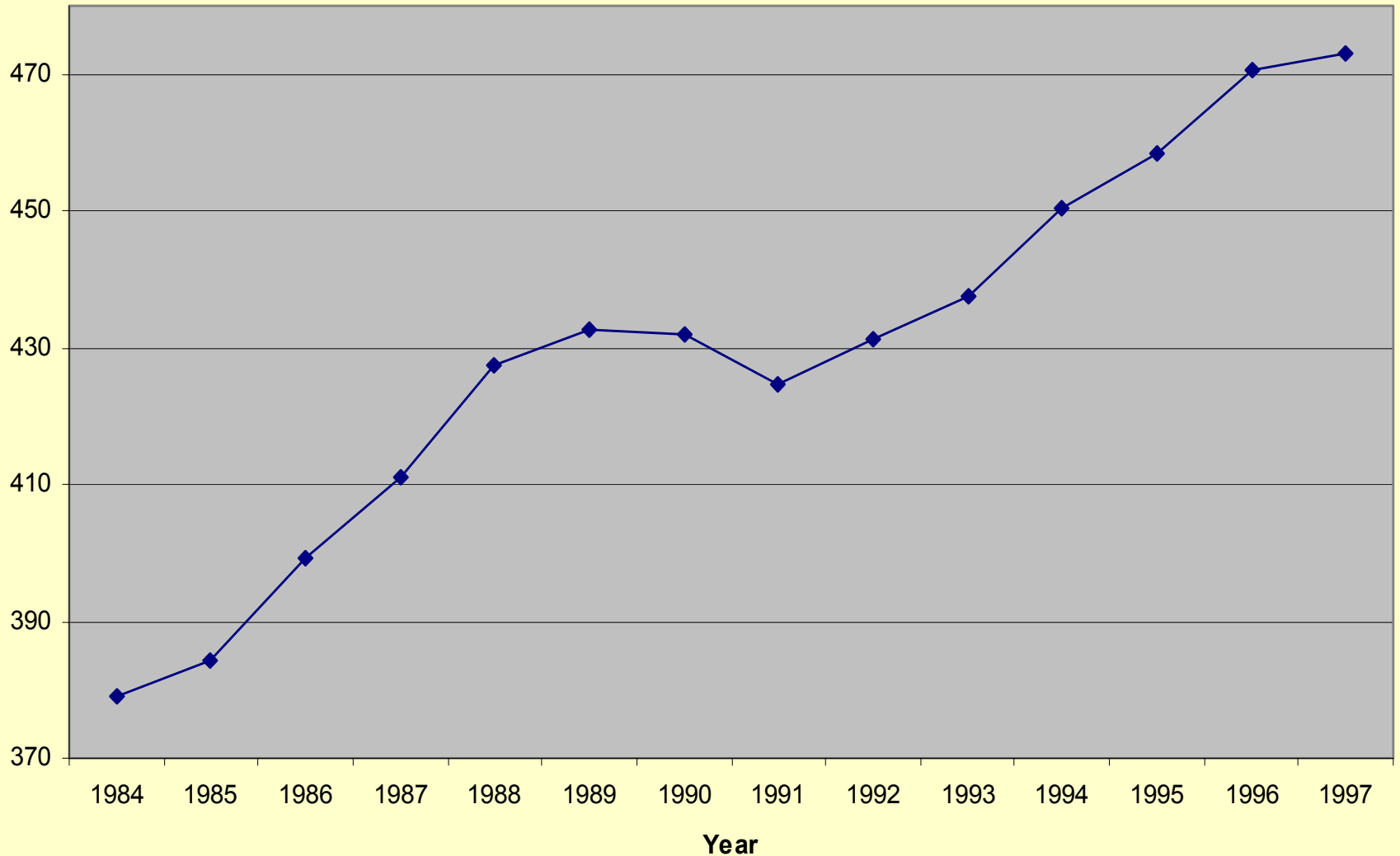
20th Century Transportation Shift



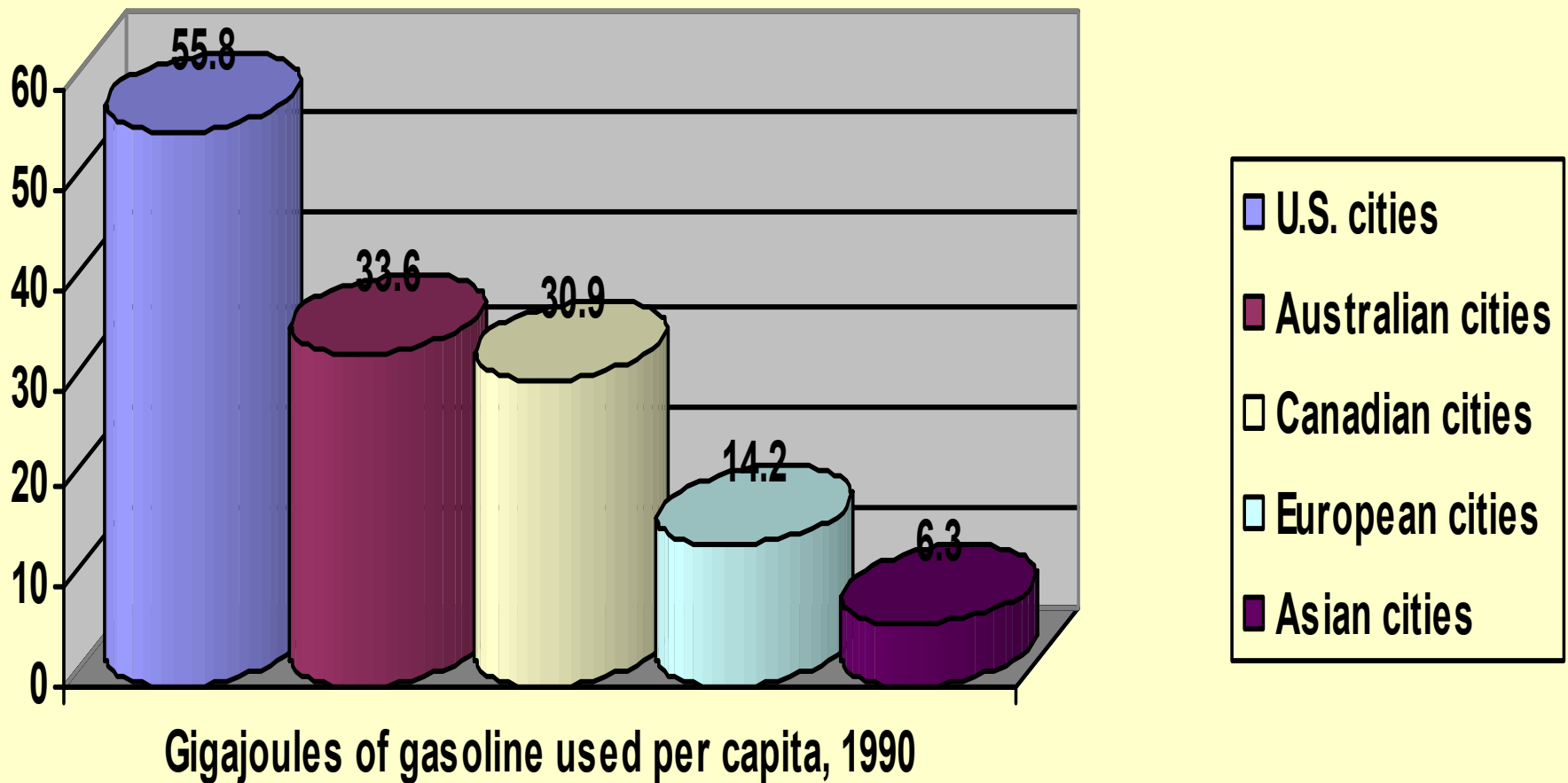
Increasing Oil Consumption by Our Transportation Sector



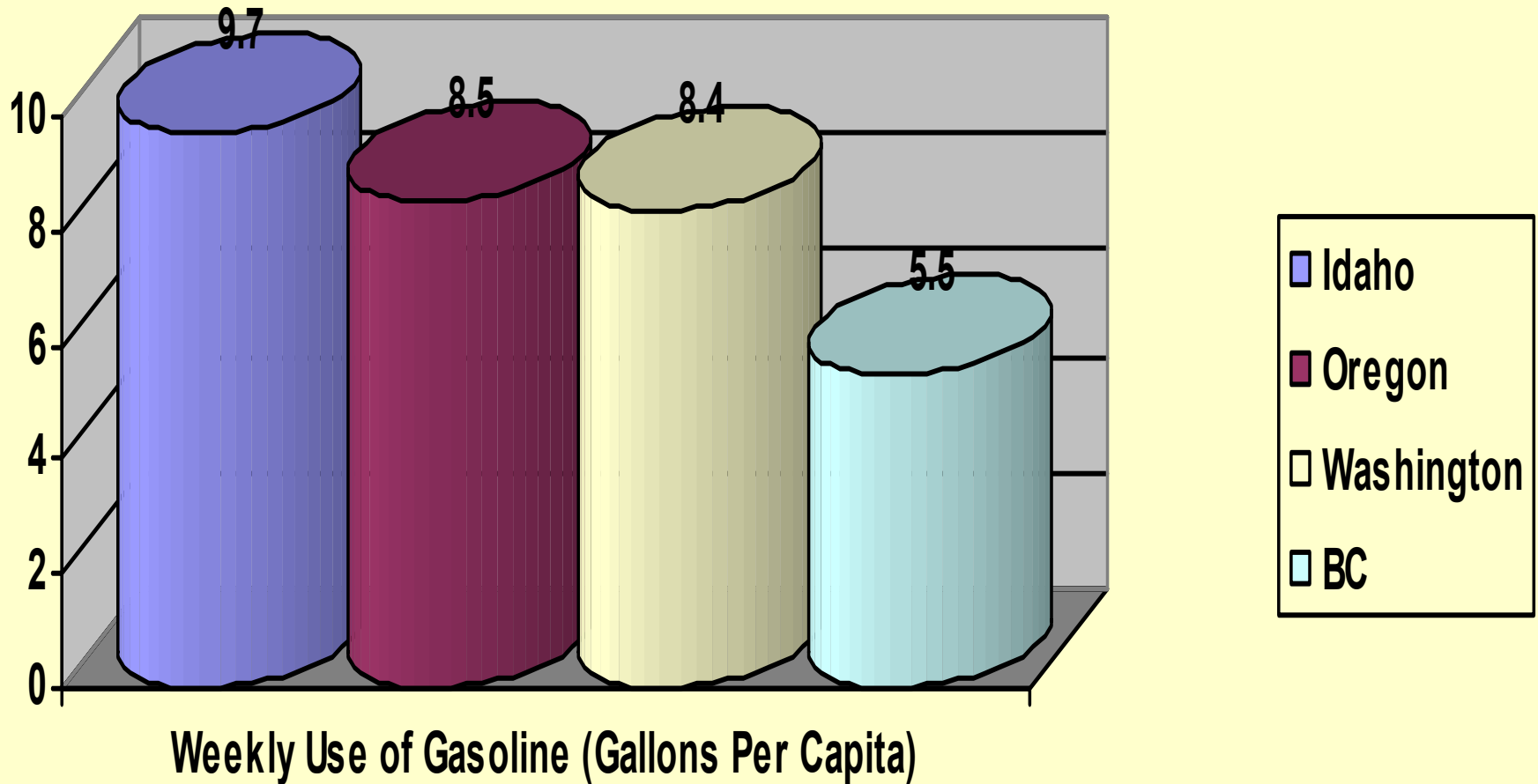
U. S. CO₂ Emissions Growth Due to Transportation (in MMTC)



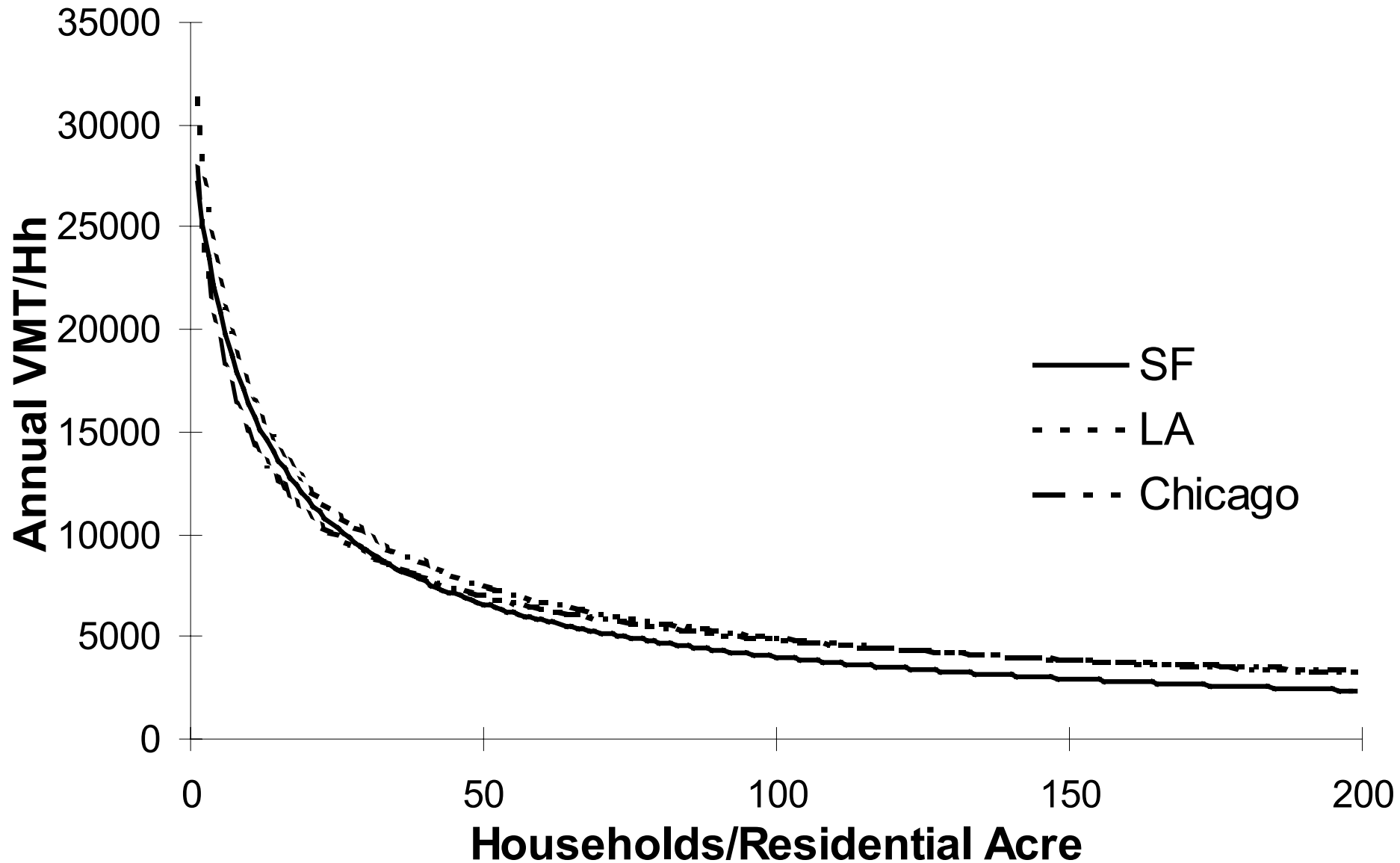
Per Capita Gasoline Use, 1990



Per Capita Gasoline Use, 2002



Driving vs Residential Density



The Holtzclaw Calculator

Density	Transit Service	Vehicles	Annual Mileage	Annual Fuel Use	Global Warming
Hh/Res Acre	Veh/hr - 1/4 mi	Avg Veh/Hh	Avg VMT/Hh	Gals Gasoline	tons CO2/1000 Hh
1	0	2.4	32237	1612	22.6
3	0	2.0	22844	1142	16.0
12	24	1.5	14792	740	10.4
24	56	1.3	11903	555	8.3

National Carbon Emissions Reductions Potential

- NRDC's David Goldstein: If all new housing were built in suburbs with smart-growth rather than sprawl characteristics, we would reduce carbon emissions by roughly 40 million metric tons (MMT) a year by 2010.
- We would save 200 MMT a year in 50 years (assuming constant auto efficiency).

Smart Growth



- Mix land uses
- Transportation and housing choices
- Create walkable communities
- Preserve open space, direct development toward existing communities
- Public participation

Orenco Station

HILLSBORO, OREGON

- Transit-oriented
- Efficient use of land
- Varied housing, live/work units
- Walk to shops, offices



Atlantic Station

ATLANTA, GEORGIA

- 15-52% reduction in VMT compared to suburban scenarios
- Brownfield cleanup
- Efficient use of land
- Walk to conveniences, transit



Massachusetts Community Preservation Initiative

- Helps local leaders, residents understand impacts of future growth
- Buildout maps for every community in MA
- Software tools, technical assistance and outreach to help communities make planning decisions

2002 Winner, EPA National Award for Smart Growth Achievement, Community Outreach and Education

Reforming State and Local Policies

- Smart growth land-use planning policies and practices
 - Growth Management Acts
- Smarter infrastructure investments
 - Transportation investment (traditional bias towards highway construction)
 - Water & Sewer
 - Schools

Reforming State Land-Use Planning

- In 1920s, Commerce Dept. developed model state planning statutes still in use
- As of 2001 the American Planning Association (APA) found that all but 13 states were pursuing statewide reforms

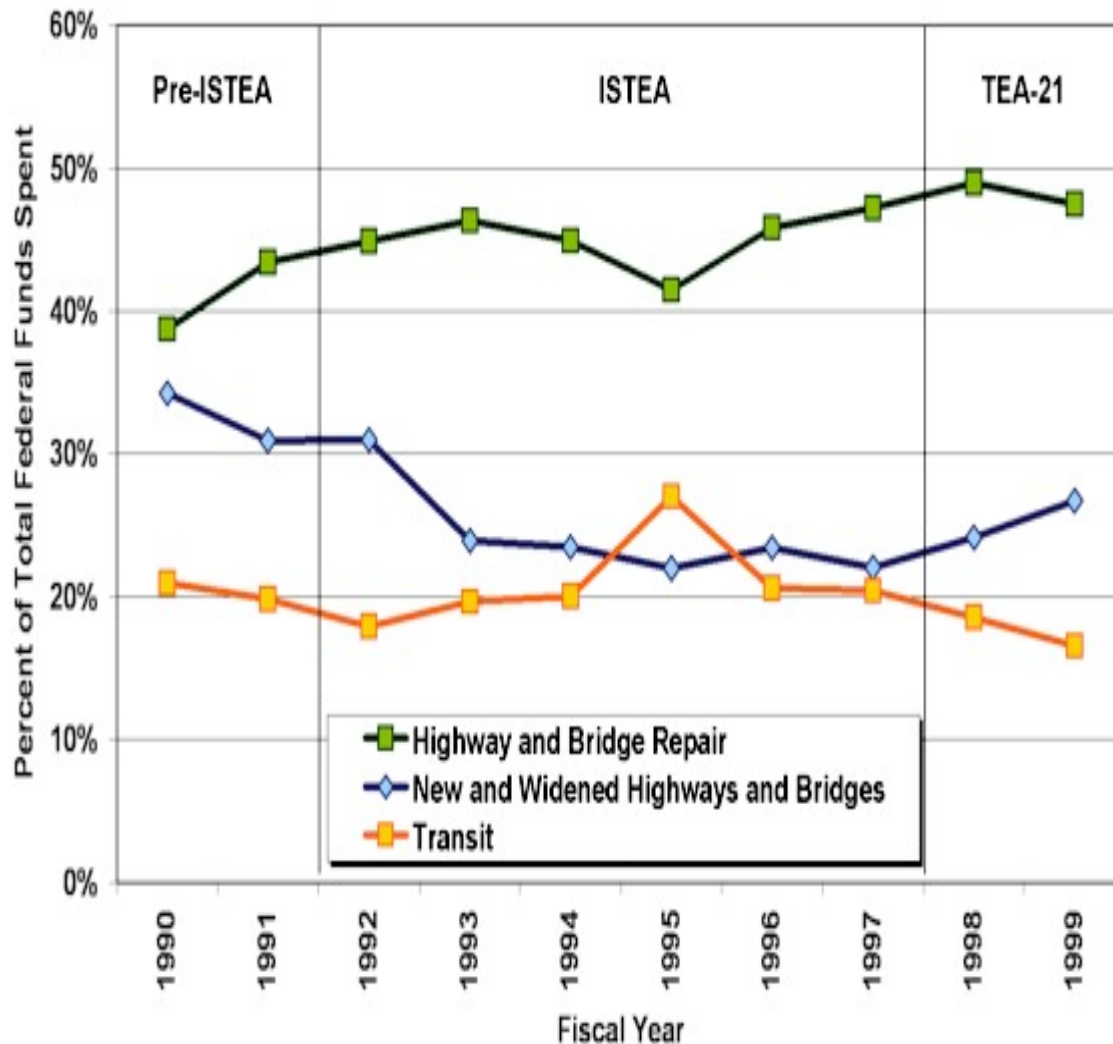
Reforming Local Land-Use Planning

- **Zoning:**
 - Often mandates sprawl through strict separation of uses and low density
 - Exclusionary zoning
- **Infrastructure:**
 - Little regard to cumulative or future environmental impacts
 - New infrastructure built to overcapacity can spur new sprawl. Highway interchanges and sewer trunk lines attract new users like magnets.

Reforming Federal Transportation Investments

- Federal Government provides 20-25% of transportation funding
- TEA-21, passed in 1998, authorized \$173 billion for highways, 4x the \$41 billion authorized for transit.
- Programs like “New Starts,” which funds the construction of new systems or lines are very oversubscribed.

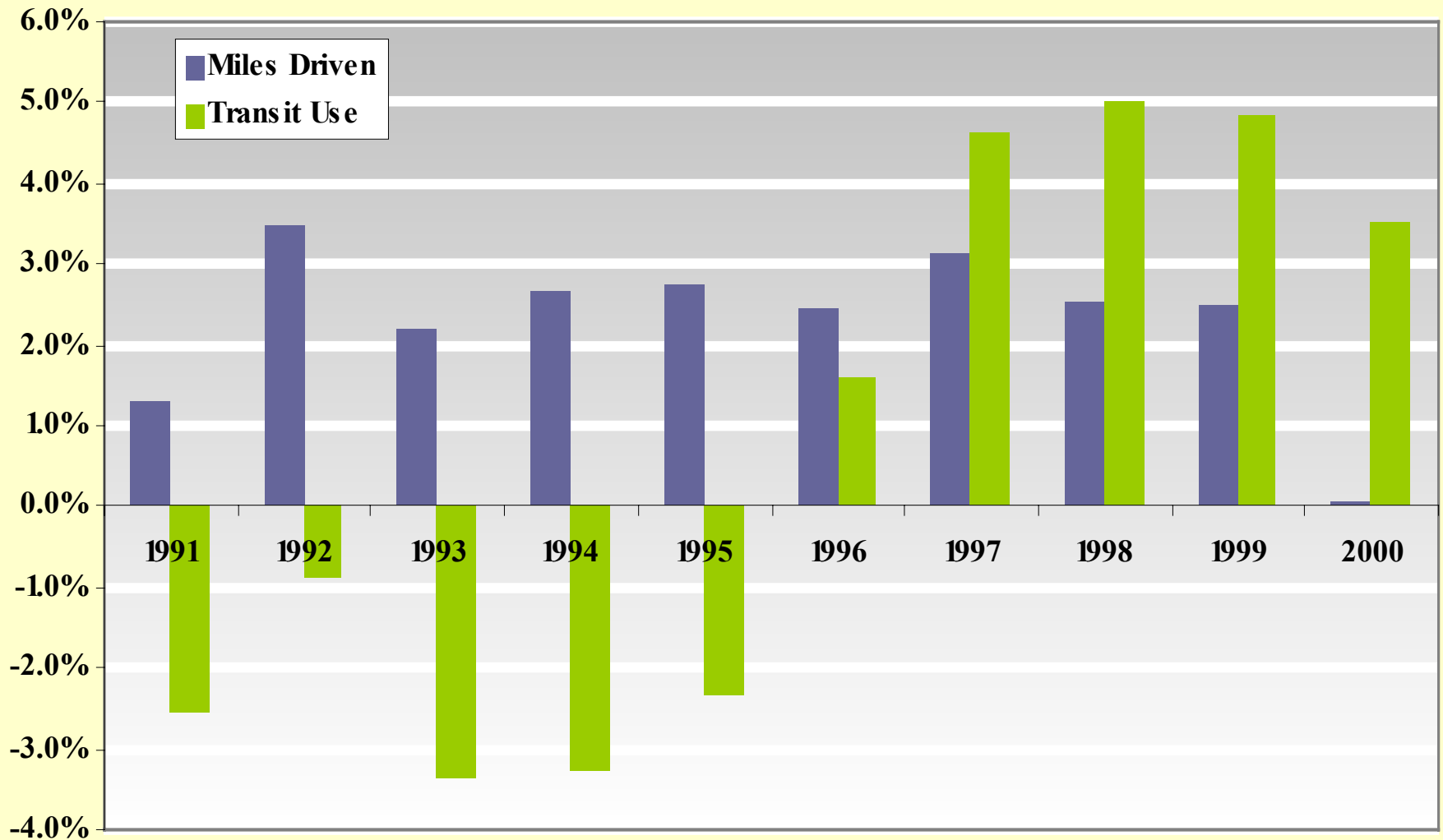
Reforming State Investments



- **1991-1995, % spending on alternatives grew and new road construction % shrank.**
- **In 1998-99 alone, the portion spent on transit shrank 19% while road-building grew 21%.**

Strong Demand for Transit

Ten Year Trend



For More Information about
NRDC's Smart Growth and
Transportation Program:

<http://www.nrdc.org/cities/smartGrowth/>

dlovaas@nrdc.org

202-289-6868

